

INTERNATIONAL SEARCH REPORT

International Application No

PCT/N02004/000395

A. CLASSIFICATION OF SUBJECT MATTER

A61K49/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, CHEM ABS Data, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CHEN J. ET AL: "In vivo imaging of proteolytic activity in atherosclerosis" CIRCULATION, vol. 105, 2002, pages 2766-2771, XP008058490 see discussion column 1, paragraph 3 abstract	1-13
X	----- TUNG C.H. ET AL: "Novel factor XIII probes for blood coagulation imaging" CHEMBIOCHEM, vol. 4, 2003, pages 897-899, XP008058462 see scheme 1 page 899; figure 1 ----- -/--	1-8,12, 13

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "8" document member of the same patent family

Date of the actual completion of the international search

18 January 2006

Date of mailing of the international search report

16. 02. 2006

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>WO 00/48625 A (ZymoGenetics, Inc) 24 August 2000 (2000-08-24) page 17, lines 10-20 page 19, lines 1-5; examples 12,13 -----</p>	1-8,12, 13
X	<p>WO 01/89584 A (NYCOMED IMAGING AS; KLAVENESS, JO; TOLLESHAUG, HELGE; AMERSHAM HEALTH) 29 November 2001 (2001-11-29) page 21, paragraph 2-4 page 24, paragraph 5 - page 25, paragraph 2 page 37, paragraph 2 - page 38, paragraph 2 -----</p>	1-8,12, 13
X	<p>WO 01/91805 A (BRACCO RESEARCH USA; VON WRONSKI, MATHEW, A; MARINELLI, EDMUND, R; NUN) 6 December 2001 (2001-12-06) page 4, lines 29-31 page 3, lines 30-35; claim 10; figures 3,4; examples 29,30 -----</p>	1-3,5-13
X	<p>WO 02/26776 A (NYCOMED IMAGING AS; CUTHBERTSON, ALAN; AMERSHAM HEALTH AS) 4 April 2002 (2002-04-04) page 22, paragraph 2 page 17, lines 1,2 page 3, paragraph 2 page 24, paragraph 1 -----</p>	1-8,12, 13
X	<p>DEGRAZIA M. J. ET AL: "Synthesis of a high-affinity fluorescent PPARGgamma ligand for high-throughput fluorescence polarization assays" BIOORGANIC&MEDICINAL CHEMISTRY, vol. 11, 2003, pages 4325-4332, XP008058425 abstract; figure 1 -----</p>	1-3,5-7
X	<p>MOON WOO KYUNG ET AL: "Enhanced tumor detection using a folate receptor-targeted near-infrared fluorochrome conjugate" BIOCONJUGATE CHEMISTRY, ACS, WASHINGTON, DC, US, vol. 14, no. 3, 1 May 2003 (2003-05-01), pages 539-545, XP002326517 ISSN: 1043-1802 abstract; figure 1 -----</p>	1-3,5-7
X	<p>WEISSLEDER R. ET AL: "shedding light onto live molecular targets" NATURE MEDICINE, vol. 9, no. 1, January 2003 (2003-01), pages 123-128, XP008058423 page 123, column 2, paragraph 3; table 2 -----</p>	1-8
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	WO 2005/030265 A (AMERSHAM HEALTH AS; KLAVENESS, JO; JOHANNESSEN, EDVIN; TOLLESHAUG, HELG) 7 April 2005 (2005-04-07) page 12; examples 1,2,4 page 14 -----	1-7
E	WO 2005/030266 A (AMERSHAM HEALTH AS; KLAVENESS, JO; JOHANNESSEN, EDVIN; TOLLESHAUG, HELG) 7 April 2005 (2005-04-07) page 16; claims 5-7; examples 2,5-7 -----	1-7
E	WO 2005/058370 A (AMERSHAM HEALTH AS; KLAVENESS, JO; JOHANNESSEN, EDVIN; TOLLESHAUG, HELG) 30 June 2005 (2005-06-30) claims 5-7; examples 2,4,7-11 -----	1-7
E	WO 2005/058371 A (AMERSHAM HEALTH AS; KLAVENESS, JO; JOHANNESSEN, EDVIN; TOLLESHAUG, HELG) 30 June 2005 (2005-06-30) claims 6,7; examples 1,4,5,7 -----	1-7
P,X	JAFFER F. A. ET AL: "Molecular imaging of factor XIIIa activity in thrombosis using a novel, near-infrared fluorescent contrast agent that covalently links to thrombi" CIRCULATION, vol. 110, 2004, pages 170-176, XP008058426 see discussion abstract; figures 1,5 -----	1-8,12, 13
X,P	LAW B. ET AL: "Design, synthesis and characterization of urokinase plasminogen-activator-sensitive near-infrared reporter" CHEMISTRY&BIOLOGY, vol. 11, January 2004 (2004-01), pages 99-106, XP008058421 abstract; figure 1 -----	1-8
P,X	JAFFER F. A. ET AL: "seeing within molecular imaging of the cardiovascular system" CIRCULATION RESEARCH, vol. 94, 2004, pages 433-445, XP008058464 page 435 page 437; figures 2,3 -----	1-13

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	<p>US 2005/089470 A1 (BRUCE FLETCHER JOHNSON, FAISAL AHMED SYUD) 28 April 2005 (2005-04-28) abstract claims 3,5,37,51,54,55; figure 1; example 1</p> <p>-----</p>	1-13

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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 10-13 are directed to a diagnostic method practised on the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-13 in part

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-13 in part

An optical imaging contrast agent of formula V-L-R wherein V is one or more peptides or peptoid moieties having affinity for an abnormally expressed target in vulnerable atherosclerotic plaque, L is a linker moiety or a bond and R is one or more reporter moieties detectable in optical imaging. Excluding the subject matter of inventions 2-5.

2. claims: 1-13 in part

An optical imaging contrast agent of formula V-L-R wherein V is one or more oligonucleotides having affinity for an abnormally expressed target in vulnerable atherosclerotic plaque, L is a linker moiety or a bond and R is one or more reporter moieties detectable in optical imaging. Excluding the subject matter of inventions 1, 3-5.

3. claims: 1-13 in part

An optical imaging contrast agent of formula V-L-R wherein V is one or more oligosaccharides having affinity for an abnormally expressed target in vulnerable atherosclerotic plaque, L is a linker moiety or a bond and R is one or more reporter moieties detectable in optical imaging. Excluding the subject matter of inventions 1, 2, 4, 5.

4. claims: 1-13 in part

An optical imaging contrast agent of formula V-L-R wherein V is one or more fat related compounds having affinity for an abnormally expressed target in vulnerable atherosclerotic plaque, L is a linker moiety or a bond and R is one or more reporter moieties detectable in optical imaging. Excluding the subject matter of inventions 1-3, 5.

5. claims: 1-13 in part

An optical imaging contrast agent of formula V-L-R wherein V is one or more organic drug-like small molecules having affinity for an abnormally expressed target in vulnerable atherosclerotic plaque, L is a linker moiety or a bond and R is one or more reporter moieties detectable in optical imaging. Excluding the subject matter of inventions 1-4.

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Information on patent family members

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0048625	A	24-08-2000	AT 245439 T	15-08-2003
			AU 772103 B2	08-04-2004
			AU 2883200 A	04-09-2000
			BR 0008298 A	19-02-2002
			CA 2361273 A1	24-08-2000
			CN 1341027 A	20-03-2002
			CZ 20012916 A3	15-05-2002
			DE 60004015 D1	28-08-2003
			DE 60004015 T2	15-04-2004
			DK 1154785 T3	17-11-2003
			EP 1154785 A2	21-11-2001
			ES 2202061 T3	01-04-2004
			HU 0105284 A2	29-05-2002
			JP 2002537270 T	05-11-2002
			NO 20014012 A	02-10-2001
			PL 349924 A1	21-10-2002
			PT 1154785 T	31-12-2003
			US 6448221 B1	10-09-2002

WO 0189584	A	29-11-2001	EP 1283728 A2	19-02-2003

WO 0191805	A	06-12-2001	AU 6669601 A	11-12-2001
			CA 2410887 A1	06-12-2001
			EP 1289565 A2	12-03-2003
			JP 2004500854 T	15-01-2004
			US 2002147136 A1	10-10-2002

WO 0226776	A	04-04-2002	NONE	

WO 2005030265	A	07-04-2005	NONE	

WO 2005030266	A	07-04-2005	NONE	

WO 2005058370	A	30-06-2005	NONE	

WO 2005058371	A	30-06-2005	NONE	

US 2005089470	A1	28-04-2005	NONE	
